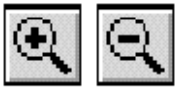
TM-U200 Series Type(B)
Operator's Manual

Using this online operator's guide

The words on the left side of this screen are **bookmarks** for all the topics in this guide.

Use the **scroll bar** next to the bookmarks to find any topic you want. Click a bookmark to instantly jump to its topic. (If you wish, you can increase the size of the bookmark area by dragging the dividing bar to the right.)

Use the **scroll bar** on the right side of this screen to move through the text.



Use the **zoom** tools to magnify or reduce the page display.

Click the **Find** button if you want to search for a particular term. (However, using the bookmarks is usually quicker.)

Complete online documentation for Acrobat Reader is located in the Help directory for Acrobat Reader.

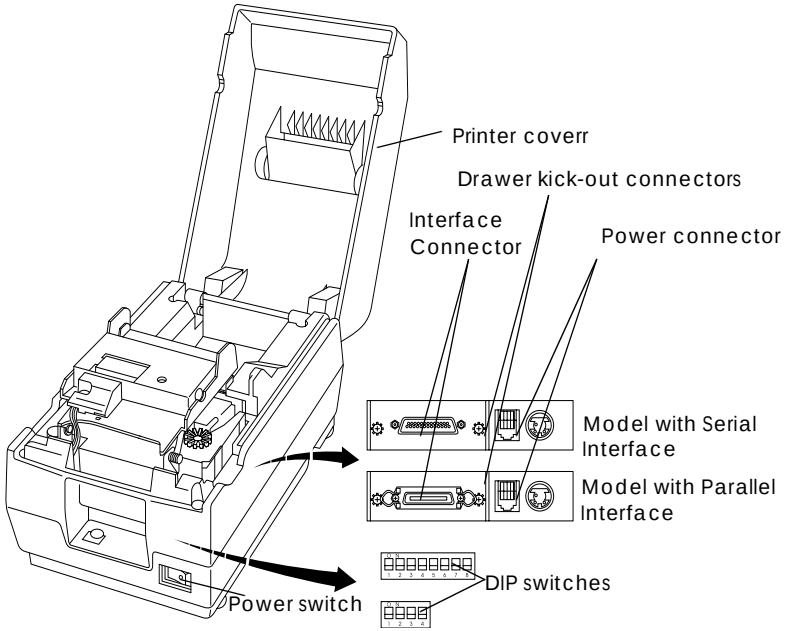
Return to main menu

TM-U200 Series
(Type B)

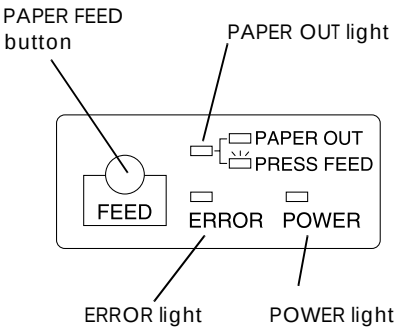
Operator's Manual

400802000

Printer parts



Control panel



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FCC CLASS A

FCC Compliance Statement

For American Users

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

WARNING

The connection of a non-shielded printer interface cable to this printer will invalidate the FCC Verification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FOR CANADIAN USERS

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

GERÄUSCHPEGEL

Gemäß der Dritten Verordnung zum Gerätesicherheitsgesetz (Maschinenlärminformations- Verordnung-3. GSGV) ist der arbeitsplatzbezogene Geräusch-Emissionswert kleiner als 70 dB(A) (basierend auf ISO 7779).

Contents

Chapter 1 ***Setting Up the Printer***

Unpacking 1-1
Selecting the Place 1-2
Attaching the Paper Roll Near-End Detector (Option) 1-2
Connecting the Printer to the Computer 1-4
    TM-U200B 1-4
    TM-U200PB 1-5
Connecting the Printer to the Drawer 1-6
Grounding the Printer 1-8
Connecting the Power Supply 1-9
Installing the Ribbon Cassette 1-11
Installing the Paper Roll 1-13
Running the Self Test 1-17
Setting the DIP Switches 1-18
Using the Power Switch Cover 1-21
Affixing the Fastening Tape (Option) 1-22

Chapter 2 ***Using the Printer***

Operating the Control Panel 2-1
    Switch 2-1
    Button 2-1
    Indicator lights 2-2

Chapter 3 ***Troubleshooting***

Troubleshooting 3-1
    General problems 3-1
    Printing problems 3-1
    Removing jammed paper 3-3
Hexadecimal Dump 3-7

Chapter 4 ***Reference Information***

Printing Specifications 4-1
Character Specifications 4-2
Paper Specifications 4-3
Electrical Specifications 4-5
Safety and EMI Standards Applied 4-5
Reliability 4-6
Environmental Conditions 4-6
Interface Specifications 4-7

Introduction

Features

The TM-U200 Series printers are one-station printers for ECR and POS use that can be used for printing the results of weighing or measuring.

TM-U200 Series (Type B) has the following 2 models.

- Two-color type with a serial interface
- Two-color type with a parallel interface

The main features of the TM-U200 Series printers are the following:

- ❏ High-speed printing through logic-seeking control
- ❏ Excellent reliability and long life due to use of two stepping motors, one for moving the carriage and one for paper feeding
- ❏ Flexible paper feed setting permits printing of any user-defined format
- ❏ Command protocol based on ESC / POS, a widely used standard
- ❏ Built-in drawer kick-out interface provides capability to drive two drawers
- ❏ Selectable character fonts (7 x 9, 9 x 9)
- ❏ Semi-automatic paper loading capability
- ❏ AC adapter provides compact power supply
- ❏ Compact and light in weight
- ❏ Automatic Status Back (ASB) function to send printer status changes automatically
- ❏ Bidirectional parallel interface in accordance with the IEEE 1284 Nibble / Byte Modes
- ❏ Two-color printing (black and red)

About This Manual

Setting Up and Using

- ❑ **Chapter 1** contains information on unpacking the printer, setting it up, running the self test, and setting the DIP switches.
- ❑ **Chapter 2** contains information on using the printer.
- ❑ **Chapter 3** contains troubleshooting information.

Reference

- ❑ **Chapter 4** contains specifications.

Notes, Cautions, and Warnings

Note:
Notes have important information and useful tips on the operation of your printer.

⚠ CAUTION:

Cautions must be observed to avoid minor injury to yourself or damage to your equipment.

⚠ WARNING:

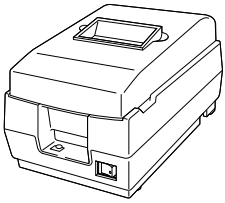
Warnings must be followed carefully to avoid serious bodily injury.

Chapter 1

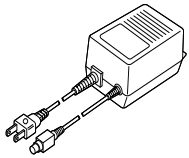
Setting Up the Printer

Unpacking

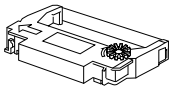
When you unpack the TM-U200 Series Type B printer, make sure you have these items.



Printer

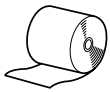


Power supply (The power supply may not be included with the printer with the serial interface.)



Ribbon cassette

Hexagonal lock screw (2 pcs)
(only for the printer with the serial interface and only included when the power supply is also included)



Roll paper

Power switch cover

If any item is missing or damaged, please contact your dealer for assistance.

Note:
See the Note on page 1-5 for information on the screws.

Selecting the Place

Place the printer on a surface that is as horizontal as possible.

The printer should be installed so that it does not move or vibrate during paper cutting or the drawer kick-out operation.

Fastening tape is available as an option.

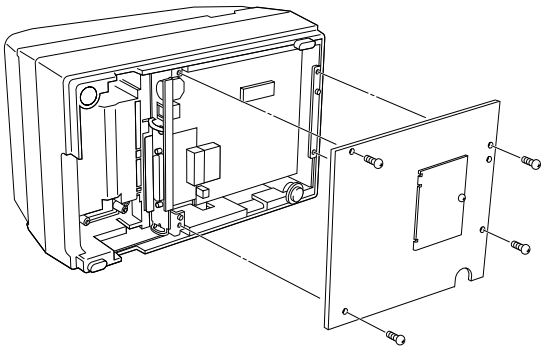
Attaching the Paper Roll Near-End Detector (Option)

If you do not have a paper roll near-end detector or do not want to attach it, skip this section.

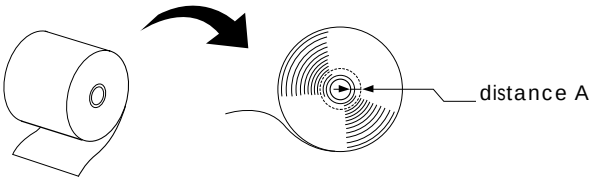
> ***Note:***
> *If you use this detector, use paper rolls with a core diameter 10.5 to 12.5 mm so that the detector detects the remaining paper correctly.*

1. Make sure that the power supply is disconnected from the printer.

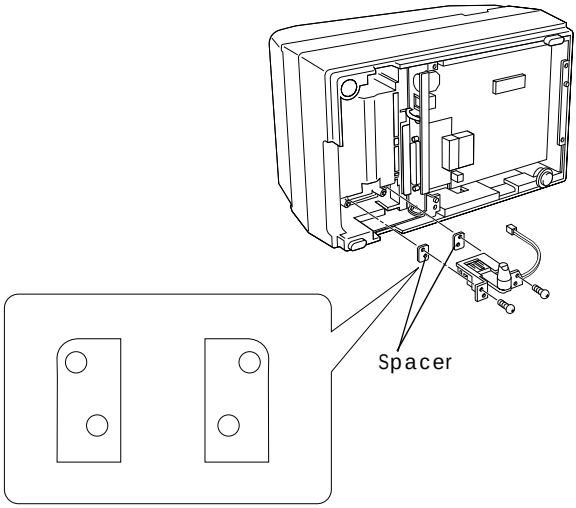
2. Remove four screws from the bottom of the printer; then remove the cover.



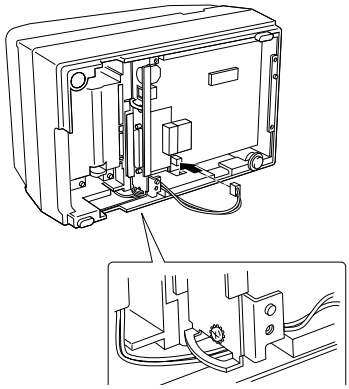
3. Two spacers are included with the near-end detector. See the illustration below and decide whether or not you want to use them. Use them if you want the near-end detector to be triggered when distance A is 3 to 4 mm; otherwise it will be triggered when distance A is approximately 6 mm.



4. Secure the paper roll near-end detector (and spacers) with two screws. When you insert the spacers, be sure you set the spacers in the direction shown in the illustration.



5. Connect the connector for the detector to CN11 of the printer. Position the cable as shown in the illustration.



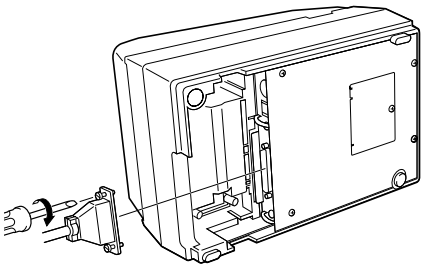
6. Replace the cover and fasten it with the four screws.

Connecting the Printer to the Computer

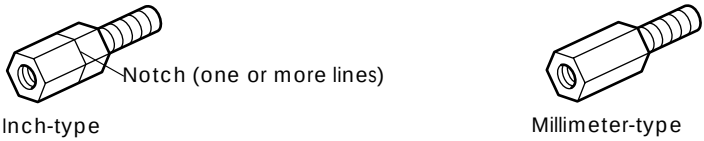
You need an appropriate serial interface or parallel interface cable to connect your computer to the printer.

The Model with Serial Interface

1. Make sure that the printer and the computer are turned off. Then plug the cable into the connector on the printer, as shown.



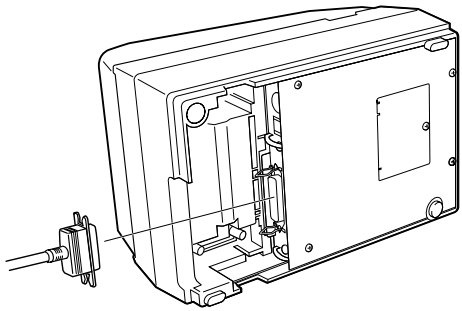
Note:
Your printer comes with inch-type hexagonal lock screws installed. If you plan to use an interface cable that requires millimeter-type lock screws, replace the inch-type screws with the enclosed millimeter-type screws by using a hex screwdriver (5 mm). To distinguish the two types of screws, see the illustration below.



2. Connect the other end of the cable to the connector on your computer.

The Model with Parallel Interface

1. Make sure the printer and the computer are turned off. Then plug the cable into the connector on the printer, as shown.



Note:
Squeeze the wire clips on the printer together until they lock in place on both sides of the connector.

2. Connect the other end of the cable to the connector on your computer.

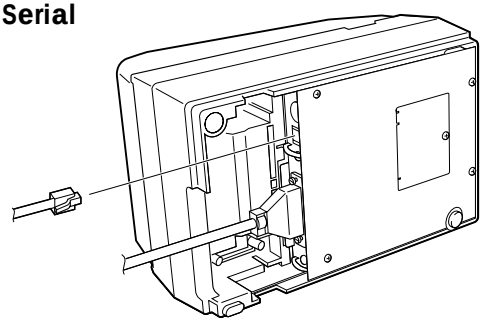
Connecting the Printer to the Drawer

⚠ *WARNING:*

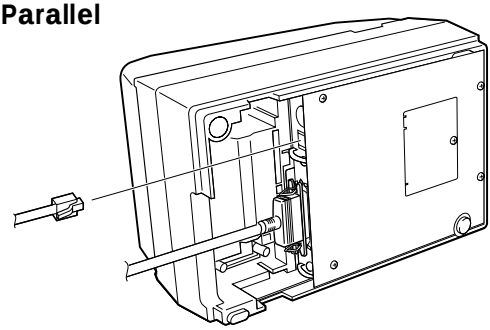
Use a drawer that matches the printer specification. Using an improper drawer may damage the drawer as well as the printer.

Plug the drawer cable into the drawer kick-out connector on the bottom of the printer next to the computer interface connector.

Model with Serial Interface



Model with Parallel Interface



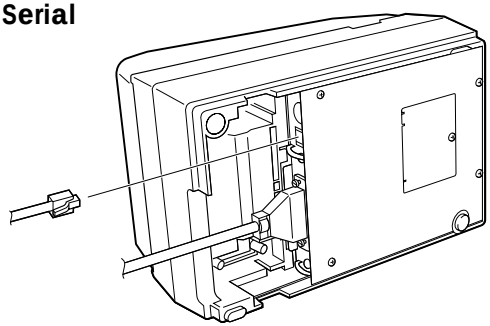
⚠ *CAUTION:*

Do not connect a telephone line to the drawer kick-out connector; otherwise the printer and the telephone line may be damaged.

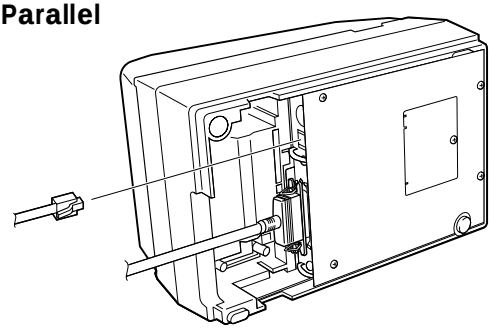
Den Drucker an die Lade anschließen

Das Kabel der Lade an die Schnappsteckerbuchse (neben der Schnittstellenbuchse) an der Unterseite des Druckers anschließen.

Model with Serial Interface



Model with Parallel Interface



⚠ *ACHTUNG:*

Kein Telefonkabel an die Schnappsteckerbuchse anschließen.

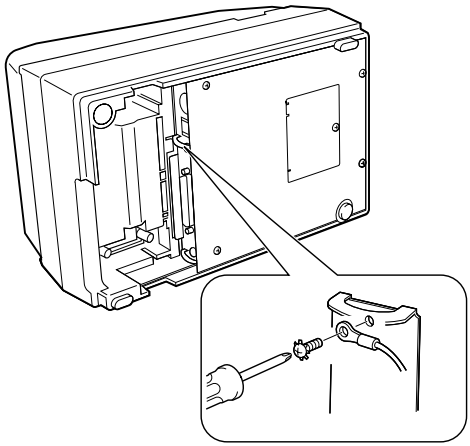
Grounding the Printer

You need a ground wire to ground your printer. Make sure the wire meets the specification below.

Thickness of wire:	AWG 18 or equivalent
Diameter of terminal to be attached:	3.2

1. Make sure the printer is turned off.

2. Connect the ground wire to the printer using the FG screw on the bottom of the printer, as shown.



Connecting the Power Supply

This printer requires an external power supply. Be sure to use a power supply that matches the specifications.

⚠ WARNING:

Using an incorrect power supply may cause fire or electrical shock.

⚠ CAUTION:

When connecting or disconnecting the power supply from the printer, make sure that the power supply is not plugged into an electrical outlet; otherwise you may damage the power supply or the printer.

⚠ CAUTION:

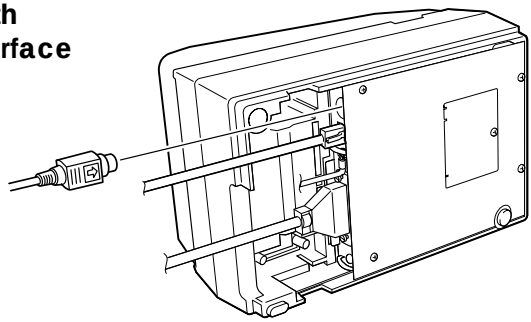
Do not connect the enclosed power supply to the EPSON customer display DM-D101 or DM-D202. This can damage the customer display and the power supply. However, you can connect this power supply to the EPSON customer display DM-D101 II or DM-D202 II.

Note:
The power supply may not be included with the printer with serial interface.

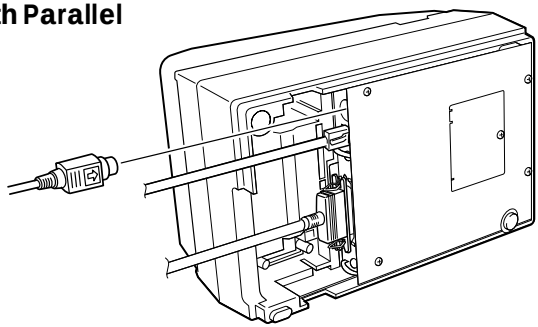
1. Make sure the printer and the power supply are turned off.

2. Plug the power supply's cable into the printer's connector as shown below. Note that the flat side of the connector faces down.

Model with Serial Interface



Model with Parallel Interface



3. Plug the power supply's cord into an outlet.

   ❑ If you ever need to remove the cable, unplug the power supply's cord from an outlet and then grasp the connector firmly at the arrow mark and pull it straight out.

Installing the Ribbon Cassette

⚠ CAUTION:

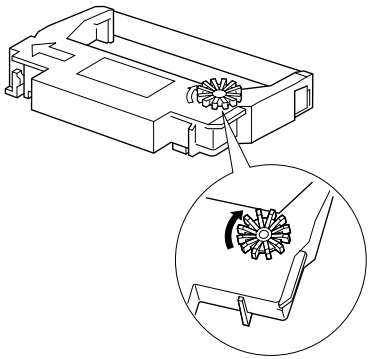
Never turn the ribbon cassette's feed knob in the opposite direction of the arrow marked on the cassette; otherwise the ribbon cassette may be damaged.

Be sure the printer is not receiving data when you replace a ribbon cassette; otherwise, data may be lost.

Note:
Use the EPSON ERC-38 ribbon cassette for your printer.

1. Open the printer cover.

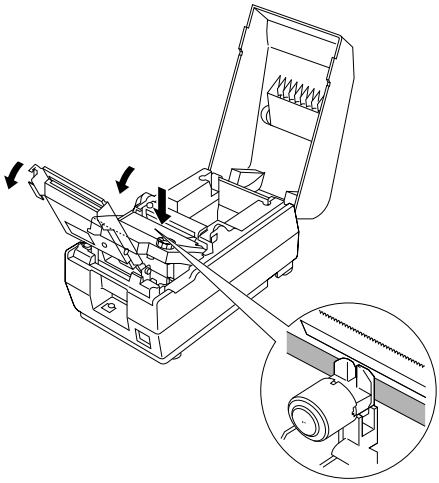
2. Turn the ribbon cassette's knob in the direction of the arrow to take up any slack in the ribbon.



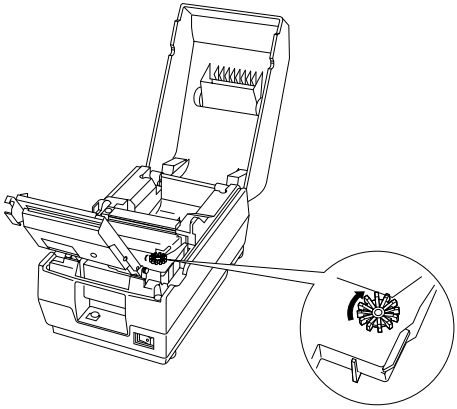
3. Open the auto cutter by pulling the tab up and toward you.

4. Insert the ribbon in the position shown in the illustration on the next page and push the ribbon cassette until it clicks.

Note:
Make sure the ribbon is installed between the print head and the platen without wrinkles or creases.



5. Turn the ribbon cassette's knob 5 or 6 times in the direction of the arrow again to take up any slack in the ribbon.



6. Close the auto cutter by using the tab.

7. Close the printer cover.

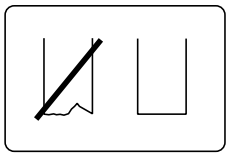
Installing the Paper Roll

Notes:

Be sure to use roll paper that meets the specifications.

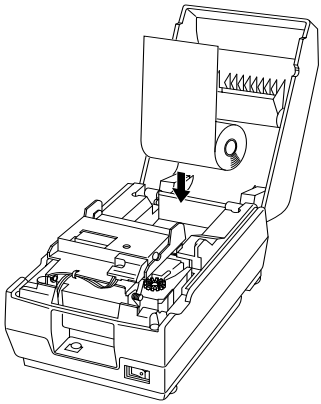
Do not use paper rolls that have the paper glued to the core because the printer cannot detect the paper end correctly. (However, if you stop printing using the optional paper roll near-end detector, you can use the glued type of paper rolls.)

1. Using scissors, cut the leading edge of the paper roll as shown below.

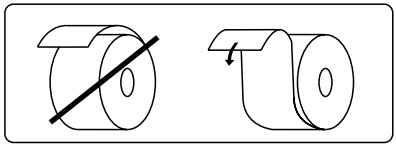


2. Turn on the printer and open the printer cover.

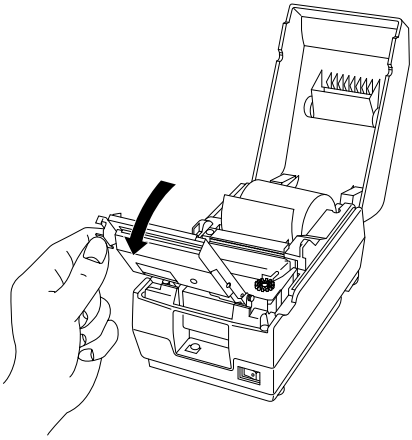
3. Insert the paper roll.



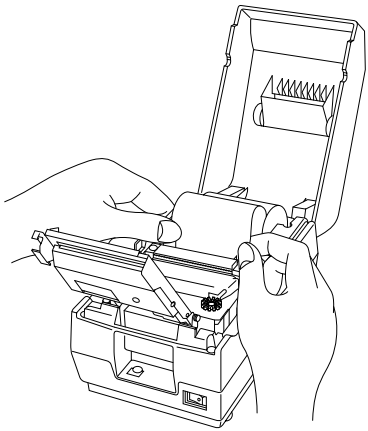
Note:
Be sure to note the correct direction that the paper comes off the roll as shown below.



4. Open the auto cutter by pulling the tab up and toward you.

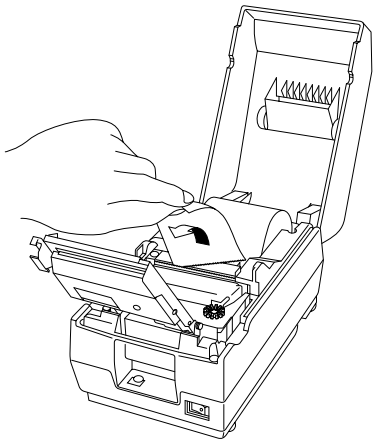


5. Hold both edges of the paper and insert it straight into the paper slot. The printer feeds the paper automatically.



6. If the paper is not coming out of the manual cutter, press the PAPER FEED button until the paper comes out.

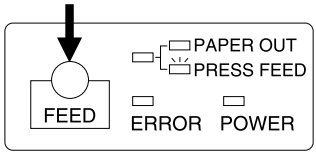
7. Cut the paper on the manual cutter.



8. Close the auto cutter by using the tab.

9. Close the printer cover.

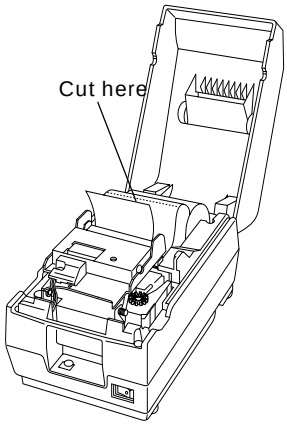
10. When the PAPER OUT light blinks, press the PAPER FEED button to set the printer on line.



To remove the paper roll, follow the steps below.

1. Open the printer cover.

2. Pull up the paper and cut the paper at the dotted line shown in the illustration below.



3. Remove the paper roll from the printer.

4. Press the PAPER FEED button to remove the remaining paper.

Note:
Do not pull the remaining paper in the opposite direction of paper feeding.

Running the Self Test

Any time that you want to check the performance of your printer you can run the self test described below. This shows whether your printer is working correctly. It is independent of any other equipment or software.

Note:
Be sure to install the ribbon cassette and the paper roll before you run the self test.

1. To perform the self test, hold down the PAPER FEED button while you turn on the printer with the power switch.

2. The printer prints the current printer settings and then the PAPER OUT light blinks to indicate that the printer is in the test printing standby state.

3. Press the PAPER FEED button to start the second part of the test, in which the printer prints a pattern using the built-in character set.

4. After the printer completes a certain number of lines, it prints the following:

   *** completed ***

   Then it enters the normal mode.

Note:
If you want to pause the self test manually, press the PAPER FEED *button. Press the* PAPER FEED *button again to continue the self test.*

Setting the DIP Switches

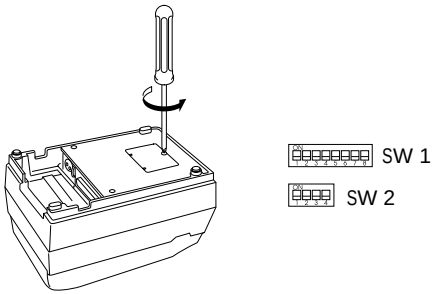
⚠ CAUTION:

Turn off the printer while removing the DIP switch cover to prevent an electrical short, which can damage the printer.

You can change your serial interface and print column settings by changing the DIP switch settings.

1. Make sure the printer is off.

2. Turn the printer over and remove the DIP switch access cover, as shown below.



3. There are two sets of switches. Notice that ON is marked on each set of switches. Use tweezers or another narrow tool to move the switches.

4. Use the following tables to set the DIP switches. Numbers starting with 1 are in the first set, and numbers starting with 2 are in the second.

Model with Serial Interface DIP-Switch Functions

DIP Switch Set 1

Switch	Function	ON	OFF
1-1	Data reception error	Ignored	Prints "?"
1-2	Receive buffer capacity	40 bytes	Approximately 1K byte
1-3	Handshaking	XON/XOFF	DTR/DSR
1-4	Word length	7 bits	8 bits
1-5	Parity check	Yes	No
1-6	Parity selection	Even	Odd
1-7	Baud rate	4800 BPS	9600 BPS
1-8	Busy condition	Receive buffer full	Off line or receive buffer full

DIP Switch Set 2

Switch	Function	ON	OFF
2-1	Print column selection 7 × 9 font/9 × 9 font	42/35	40/33
2-2	Reserved. Setting must not be changed. (Fixed to ON)		
2-3	I/F pin 6 reset signal	Enabled	Disabled
2-4	Reserved. Setting must not be changed. (Fixed to ON)		

⚠ CAUTION:

Do not change the settings of switches 2-2 and 2-4 (always on). Changing these settings may cause inferior print quality.

Model with Parallel Interface DIP-Switch Functions

DIP Switch Set 1

Switch	Function	ON	OFF
1-1	Auto-line feed	Enabled	Disabled
1-2	Receive buffer capacity	40 bytes	Approximately 1K byte
1-3	Undefined		
1-4	Undefined		
1-5	Undefined		
1-6	Undefined		
1-7	Undefined		
1-8	Handshaking (BUSY condition)	Receive buffer full or reading data	Off line, receive buffer full, or reading data

DIP Switch Set 2

Switch	Function	ON	OFF
2-1	Print column selection 7×9 font/9×9 font	42/35	40/33
2-2	Internal use Setting must not be changed. (Fixed to ON)		
2-3	Undefined		
2-4	Internal use Setting must not be changed. (Fixed to ON)		

⚠ CAUTION:

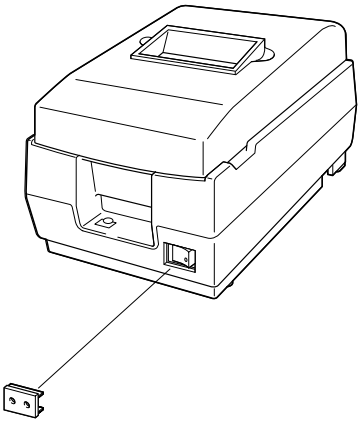
Do not change the settings of switches 2-2 and 2-4 (always on). Changing these settings may cause inferior print quality.

5. Replace the DIP switch cover and secure it with the screw.

Using the Power Switch Cover

You can use the provided power switch cover to protect the power switch from accidental or improper operation. Attach the cover as shown in the illustration below.

You can turn the power on or off with the switch cover attached by inserting a pointed object (like a ball point pen) through either of the two small holes on the switch cover.



⚠ *WARNING:*

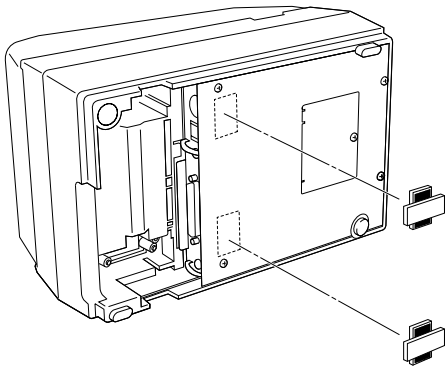
If an accident occurs when the power switch cover is attached, unplug the power supply cord from the outlet immediately.

Affixing the Fastening Tape (Option)

Two sets of tape are included as an option to fasten your printer to a countertop or other surface. Follow the steps below:

1. Clean the countertop or other surface where the printer will be installed.

2. Peel the green backing paper off of one side of each of the two sets of tapes and affix them to the bottom of the printer, as shown below.



3. Peel the green backing paper off of the other side of the tape.

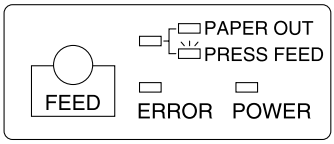
4. Press the printer onto the countertop; it will be held firmly in place by the fastening tape.

Chapter 2

Using the Printer

Operating the Control Panel

You can feed paper with the button on the control panel. The indicator lights help you monitor the printer's status.



Switch

The power switch on the front of the printer turns the printer on and off.

Button

PAPER FEED

Press the PAPER FEED button once to advance roll paper one line. You can also hold down PAPER FEED to feed the paper continuously.

This button is also used while replacing the paper roll. The PAPER OUT light blinks and printer enters the on-line recovery standby state after paper loading. When the PAPER OUT light blinks, press the PAPER FEED button to set the printer on line.

Note:
*This button can be disabled by the **ESC c 5** command, but depending on the setting of **GS z 0** command, it can work while replacing the paper roll even if it has been disabled.*

Indicator lights

The control panel lights provide information on printer conditions.

POWER *(Green)*

The POWER light is on when the printer power is on.

PAPER OUT *(Red)*

This light is on when the paper roll is at the end or near the end.

This light blinks in the following cases. When it blinks, press the PAPER FEED button.

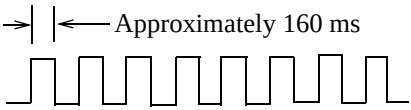
- ❏ In the self-test standby mode
- ❏ In the on-line recovery standby state after semi-auto loading

Note:
The paper near-end detector is an option.

ERROR (Red)

This light is on when the printer is off line. It blinks to indicate an error condition.

The blinking pattern shown below indicates that the temperature of the print head is too high. The printer recovers automatically and resumes printing when the head cools.



If the printer stops working and the ERROR light is blinking, turn the printer off, check for jammed paper, and remove it by following the instructions on page 3-3, if necessary. Then turn the printer back on. If the printer still does not work, unplug the power supply cord from the outlet immediately; then contact a qualified service person.

⚠ CAUTION:

The print head becomes very hot during printing. Allow it to cool before you reach into the printer.

Note:
The power switch and PAPER FEED button can also be used to start the self test.

Chapter 3

Troubleshooting

Solving Common Problems

This chapter gives solutions to some of the more common printer problems.

General problems

The lights on the control panel do not come on.

Make sure the power supply cables are correctly plugged into the printer, the power unit, and to the power outlet.

Make sure that power is supplied to the power outlet. If the outlet is controlled by a switch or timer, use another outlet.

Printing problems

The ERROR light is blinking and the printer does not print.

First, turn off the printer and check for a paper jam. (See the paper jam description on page 3-3.)

If there is no paper jam and the printer has been printing for quite a while, the print head may be overheated. If the print head is overheated, the printer will resume printing when the head has cooled (usually within two or three minutes).

If there is no paper jam and the print head is not overheated, turn off the printer and turn it back on after about 10 seconds. If the printer still does not work, unplug the power supply cord from the outlet immediately. Then contact a qualified service person.

The ERROR light is off, but nothing is printed.

Try to run the self test to check that the printer works properly. See the self test instructions in Chapter 1 to run the self test. If the self test does not work, contact your dealer or a qualified service person.

If the self test works properly, check the following:

1. Check the connection at both ends of the interface cable between the printer and the computer. Also make sure that this cable meets the specifications for both the printer and the computer.

2. The data transmission settings may be different between the printer and computer. Make sure that the printer's DIP switch settings for data transmission are the same as the computer's. You can print the printer's interface settings using the self test.

If the printer still does not print, contact your dealer or a qualified service person.

The printer sounds like it is printing, but nothing is printed.

The ribbon cassette may not be installed properly. See the instructions in Chapter 1.

The ribbon may be worn out. Replace the ribbon cassette as described in Chapter 1.

The printout is faint.

The ribbon may be worn out. Replace the ribbon cassette as described in Chapter 1.

A line of dots is missing in the printout.

The print head may be damaged. Stop printing and contact your dealer or a qualified service person.

Removing jammed paper

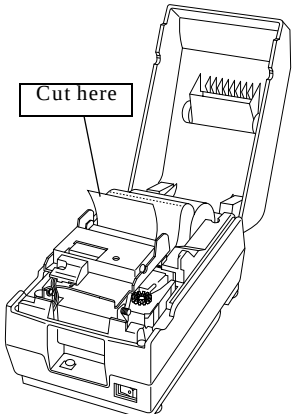
Follow these steps to clear a paper jam:

⚠ *CAUTION:*

The print head becomes very hot during printing. Allow it to cool before you reach into the printer.

1. Open the printer cover.

2. Pull up the paper and cut the paper at the dotted line shown in the illustration below.

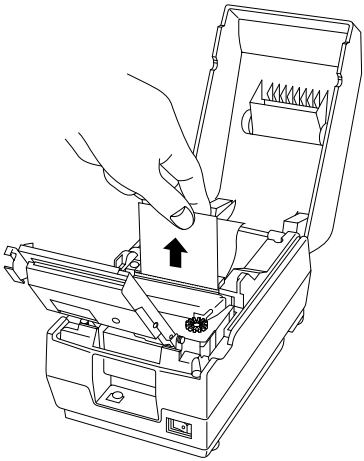


3. Remove the paper roll from the printer.

4. Open the auto cutter by pulling the tab up and toward you.

5. Remove the jammed paper by pulling it in the direction of paper feeding.

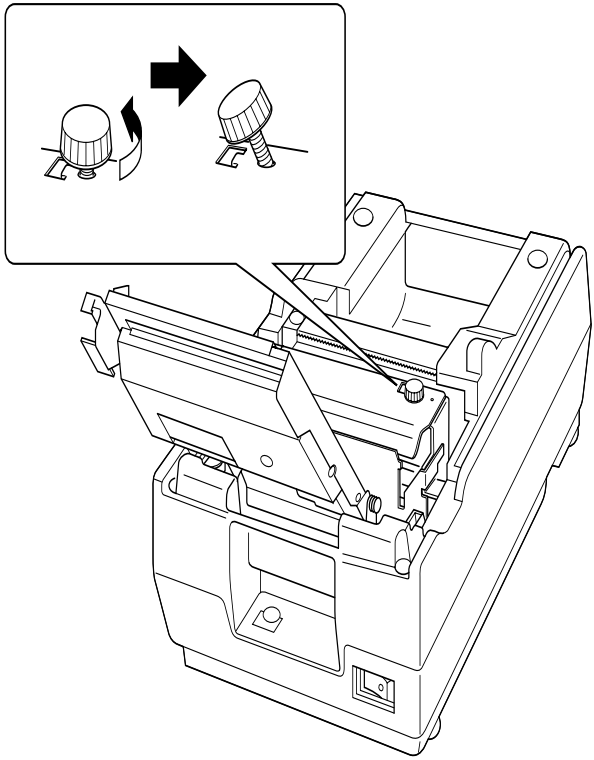
   Note:
   Do not pull the jammed paper in the opposite direction of paper feeding.



6. If paper still remains in the printer, follow the steps below.

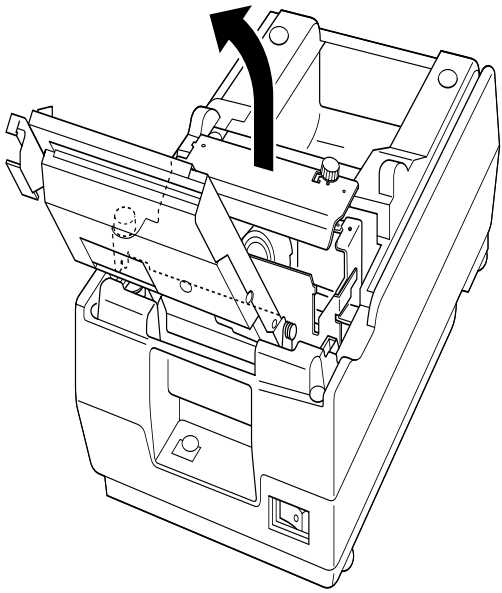
7. Remove the ribbon cassette.

8. Loosen the screw securing the print head cover. Turn the screw only until you can tilt it as shown in the illustration.



Note:
Do not remove the screw from the print head cover.

9. Lift up the print head cover.



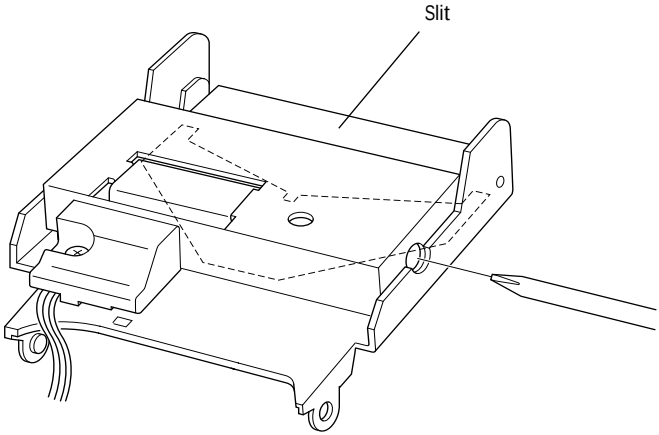
10. Remove all the jammed paper.

Note:
Do not pull the jammed paper in the direction opposite of paper feeding.

11. Replace the print head cover and secure it with the screw.

12. Replace the ribbon cassette and close the auto cutter

13. .If the auto cutter blade is not in its normal position (if you can see the blade in the auto cutter slit, the blade is not in the normal position), insert a screwdriver into the right side of the auto cutter, and turn the gear inside to move the blade to the normal position.



14. Replace the paper roll and close the printer cover.

Hexadecimal Dump

This feature allows experienced users to see exactly what data is coming to the printer. This can be useful in finding software problems. When you turn on the hex dump function, the printer prints all commands and other data in hexadecimal format, along with a guide section to help you find specific commands.

To use the hex dump feature, follow these steps:

1. After you make sure the printer is off, set DIP switch 1-2 to ON.

2. Turn on the printer while you hold down the PAPER FEED button; then release and press the PAPER FEED button quickly.

   Note:
   Perform releasing and pressing the PAPER FEED *button before the printer finishes initializing; otherwise the printer begins the self test.*

3. When the printer enters the hex dump mode, it prints "Hexadecimal Dump."

4. Run any software program that sends data to the printer. The printer prints all the codes it receives in a two-column format. The first column contains the hexadecimal codes, and the second column gives the ASCII characters that correspond to the codes.

   Hexadecimal Dump

   1B 21 **00** **1B** 26 **02** 40 40 : . ! . . & . @ @
   1B 25 **01** **1B** 63 34 **00** **1B** : . % . . c4 . .
   41 42 43 44 45 46 47 48 : ABCDEFGH

   - ❑ A period (.) is printed for each code that has no ASCII equivalent.
   - ❑ Control codes are printed in bold for emphasis.
   - ❑ During the hex dump all commands except **DLE EOT** and **DLE ENQ** are disabled.

5. When the printing finishes, turn off the printer or reset it to turn off the hex dump mode.

6. If you changed DIP switch 1-2, set it back to OFF.

Chapter 4

Reference Information

Printing Specifications

Printing method:	Serial impact dot-matrix
Head wire configuration:	9-pin serial configuration
Printing direction:	Bi-directional, logic-seeking
Characters/line (default):	See table on page 4-2.
Character spacing (default) Fonts A and B:	See table on page 4-2.
Printing speed:	Approximately 3.5 lines / second (40 columns, 16 characters / inch) Approximately 6.4 lines / second (16 columns, 16 characters / inch) (excluding data transmission time and processing time)

Note:

When printing exceeds the allowable print duty cycle, the printer automatically stops printing. In this case, the printing speed described above is not guaranteed.

Character Specifications

Number of characters: Alphanumeric characters: 95
Extended graphics: 128 x 8 pages,
International characters: 32

Character structure: 7 x 9 (the total number of dots in horizontal: 400 in half dot units)
9 x 9 (the total number of dots in horizontal: 400 in half dot units)

Character size: See table below.

Character Sizes, Character Spacing, Character Columns

Character structure		Character size W x H (mm)	Character spacing Dot space	CPL	CPI
W x H (mm)	Character				
7 x 9	ANK	1.2 x 3.1	3 half dots	40	16
	Graphics	1.7 x 3.1	0	40	16
9 x 9	ANK	1.6 x 3.1	3 half dots	33	13.3
	Graphics	2.0 x 3.1	0	33	13.3
7 x 9	ANK	1.2 x 3.1	2 half dots	42	17.8
	Graphics	1.6 x 3.1	0	42	17.8
9 x 9	ANK	1.6 x 3.1	2 half dots	35	14.5
	Graphics	1.9 x 3.1	0	35	14.5

CPL = Characters per line

CPI = Characters per inch

LPS = Lines per second

Notes:

- The default is 7 x 9 with 3-dot spacing in half-dot units.
- 7 x 9 with 2-dot spacing in half-dot units and 9 x 9 with 2-dot spacing in half-dot units depend on the DIP switch setting.

Paper Specifications

Paper feed method: Friction feed

Paper feed pitch: Default 4.233 mm (1/6 inch)

Can be set in units of 0.176 mm (1/144 inch) by the **ESC 2** and **ESC 3** commands.

Paper feed speed: Approximately 25 lines/second (4.17 inches/second) (continuous feeding)

Paper size and weight: **Normal paper (single-ply)**

Size:	Width 76 mm ± 0.5 mm (3.0" ± 0.02")
Maximum outside diameter:	83 mm (3.27")
Thickness:	0.06 to 0.085 mm (.0024 to .0033")
Weight:	52.3 to 64.0 g/m^2 (13.9 to 17 lb) 45 to 55 kg (20.41 to 24.94 lb)/ 1000 sheets/ 1091 mm × 788 mm (43.00" × 31.02")

Pressure-sensitive paper

Maximum 1 original + 1 copy

Size:	Width 76 mm ± 0.5 mm (3.0" ± 0.02")
Maximum outside diameter:	83 mm (3.27")
Thickness:	0.05 to 0.08 mm (.0020 to .0031") (Total thickness should be 0.13 mm or less with a combination of 0.05 to 0.08 mm sheets.)
Recommended paper:	MITSUBISHI PAPER MILLS, LTD. Non-carbon paper (blue color) Top and middle sheets: N40 (thickness: 0.06 mm, weight: 47.2 g / m^2) Bottom sheet: N60 (thickness: 0.08 mm, weight: 68.0 g / m^2)

Electrical Specifications

Power voltage: 24 VDC ± 10%

Packaged AC adapter: One of the following 5 AC adapters is selected, depending on local power:

Factory setting	Voltage	Manufacturer Number
Japan	100 V ± 10 %, 50/60Hz	PA-6508
North America	120 V ± 10 %, 60 Hz	PB--6509
Europe (Germany)	230 V ± 10 %, 50 Hz	PB-6510
Europe (England)	240 V ± 10 %, 50 Hz	PA-6511
Australia	240 V ± 10 %, 50 Hz	PA-6513

Note:
The power supply may not be included with the printer with serial interface.

Current consumption (at 24 VDC, excluding driving drawer kick-out)

Operating : Average 1.2 A
Peak 2.3 A

Standby: Average 0.1 A

Safety and EMI Standards Applied

(EMC is measured with the packaged AC apater and optional PS-150)

Europe: CE marking:
EN55022
EN50082-1
EN45501
Safety standard:
TÜV

North America: EMI:
FCC class A

Safety standards:
UL1950-2TH-D3

Reliability

Mechanism:	MCBF:	5,000,000 lines (excluding the print head)
	Life:	7,500,000 lines 800,000 automatic cut
	(The printer is defined to have reached the end of its life when it cannot function properly because of wearing out of the main parts (motors, solenoids, frames, shafts)	
Print head life:	100 million characters (when printing in average 2 dots / wire per character)	

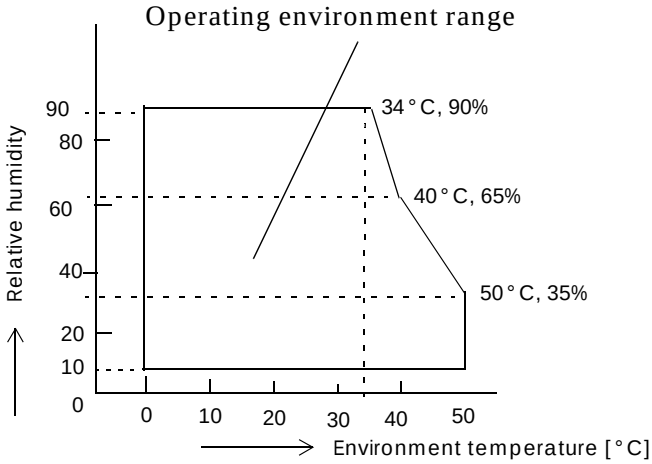
Environmental Conditions

Temperature

Operating:	0 to 50 °C (32 to 122 °F) (when the temperature is 30 °C or more, there is a limitation for the humidity. Refer to the figure on the next page.)
Storage:	–10 to 50 ° C (14 to 122° F) (except for paper, and a ribbon)

Humidity

Operating:	10 to 90% RH
Storage:	10 to 90% RH (except for paper and ribbon)



Interface Specifications

Serial interface: RS-232 compatible or RS-485 compatible

Parallel interface: IEEE 1284 compatible (Nibble / Byte Modes)

Note:
The interface is a factory installed option. One of the interfaces (RS-232, RS-485, or parallel) is already installed.

Note:
Refer to the EPSON TM-U200 Series (Type B) Specification for details.